APPENDIX B

# Site Analysis Section Detail

SITE ANALYSIS is a vital first step in the project design process. It consists of evaluating an existing or potential site as it relates to the program, the budget, and the schedule for the entire project.

Finding suitable sites with the confidence that all relevant acquisition, governmental, environmental, and engineering issues have been explored is a challenge. Occasionally, utility serviced sites can be found that are free of environmental constraints, free of easements, are reasonably priced, and have good access. Generally however, site selection is very dynamic and full of variables.

A site analysis during a Predesign Study provides direction for design and site selection based on program requirements as well as sensitive use of the land.

## B1 Identify Potential Sites

Several tools are available to assist in site selection. These tools include: review of topographic information, zoning restrictions, tax assessments, road maps, aerial photographs, drive-by inspections, discussions with major landholders, local planning officials, commercial concerns, developers of other facilities, and consultation with realtors.

Only the most promising sites require further evaluation as part of the Predesign Study. Written descriptions of the existing conditions as well as drawings should be prepared to fully describe the site. There may be more than one site that requires limited technical evaluation in this process.

## B2 The Site Programming Process

Site analysis requires a program (see Appendix A) and a site. Program and site are analyzed to determine their compatibility. The determination of the spatial needs of the program requires an analysis of the following program elements:

- **Building Footprint –** The site coverage for a building – its "footprint" – depends on the following:
    1. The total gross area of the building – see programming analysis section.
    2. The number of floors – based on programmatic requirements, site area, and zoning requirements.
    3. The configuration of the building.

- **Parking Requirements –** Often, the biggest site requirement in many programs is the area necessary for parking. This requirement may be a function of the program, or it may be set by zoning ordinances or other local regulations establishing parking ratios for different land uses.
- **Circulation and Open Space Requirements –** The area for pedestrian and vehicular circulation, access, and common open space are also major components of the program. The portion of the site allocated to circulation and open space will depend on land values, site configuration, and design objectives.
- **Special Constraints and Requirements –** Special site issues may take the form of utility easements, set backs, right-of-way, retention ponds, recreation areas, vista and sight line requirements, as well as flood-plain areas, and ecological preserves.

## B3 Site Evaluation

If multiple sites for a particular project are being evaluated, detailed technical and comparative analysis of the sites may be required to determine total site development costs. Frequently, these costs have a significant impact on the decision to select one site over another.

The following issues need to be considered when evaluating potential sites:

### B3.1 Physical Issues

- **Climate –** Identify major climate factors such as wind direction, solar orientation, temperature, humidity, and precipitation.
- **Topography –** Identify documentation that categorizes the topography and soils in the locations of each site. Use existing documentation to determine the estimated risk of construction on these sites. In some cases, limited geotechnical services are also appropriate.
- **Limited Geotechnical Work –** Perform limited geotechnical investigation of candidate sites that have questionable soil characteristics. Make a preliminary determination of the bearing capacity of the soil, site stability, and review other natural features such as surface or groundwater characteristics.
- **Utilities –** Determine availability of domestic water and its sources. Determine availability of sewer, gas, power, telephone, and any other utilities required by the project.
- **Identify Environmentally Sensitive Conditions –** Review the sites to determine sensitive environmental characteristics, such as steep slopes, unstable soils, flood plains, bogs, creeks, wetlands, habitat, and certain wildlife which may limit the development of the site.
- **Conduct Hazardous Materials Inventory –** Review property title and site records for history of underground or surface storage of hazardous materials. Also, review

regulatory agency documentation including those from the Environmental Protection Agency, Washington State Department of Ecology, county and local fire departments, power companies for listings and permit applications, solid waste permits, reporting of hazardous substance spillage, and registrations of underground storage tanks.

Should toxic wastes exist, determine the magnitude and type of contamination and propose a feasible method of disposal.

## B3.2 Regulatory Issues

- **Review Zoning Requirements –** Review with the county or city the general plan and zoning classification for each of the candidate sites and identify any inconsistencies with current zoning.
- **Review Local Requirements –** Review with county, city, or appropriate government agency any local requirements such as design review, land use permits, etc.
- **Building Codes and Requirements –** Analyze all applicable building codes that may have adverse cost impacts or cause delays in the permit process during design and construction.
- **Parking –** Review requirements for parking on the site. Evaluate surface versus garage parking options for each site.

## B3.3 Access Issues

- **Site Accessibility –** Determine the probable impact of the project on traffic flows and identify required improvements. With the assistance of the appropriate agencies, review available traffic information regarding volumes, existing road system, future plans for road improvements, and discuss possible enhancements which may be required. Determine potential auto and bus routes and other pertinent information. Conceptually analyze site access routes for buses, autos, and pedestrians. Identify right-of-ways or additional land that may be required to provide access to the site.
- **Utilities –** Research connection requirements of all utilities and identify connection requirements and costs. Utilities include water, gas, telephone, electricity, and cable service.
- **ADA Access –** Identify how this project fits into the overall objectives of the agency for program accessibility required by the Americans with Disabilities Act (ADA). Identify spaces in existing structures that should be remodeled to improve program access under ADA laws. Identify any special access requirements of clients and employees that may require accommodation exceeding code requirements. In addition, evaluate the placement, alignment, and elevation of the facility as it relates to access and parking areas.

## B4 Scheduling and Budgeting

In developing a budget and a schedule for the project, the following questions should be addressed:

- Is the site under the agency/institution's control and, if not, when will it be?
- If the agency/institution has an option on the site, how long will it be in force? Can it be renewed?
- Are there easements or other restrictions on the full use of the site? How long will it take to resolve these?
- What regulatory approvals are required before construction can begin? Who grants approvals and what information is require? How much will approvals cost? How long will it take to prepare the necessary materials, and how long will the review process take?
- What can be said about the community acceptance in which the project will be reviewed and approved? Will the project be controversial?

Once the site analysis is complete, conceptual drawings and diagrams are prepared to determine usability of sites, points of vehicular access, easements, topography, existing structures, etc. that will impact the project. Conceptual cost estimates should be developed for each site under consideration (see Project Budget Analysis Section). Both on and off-site development costs should be escalated to the time of probable construction.

It is required that the Predesign Study explain whether the preferred site conforms to the Master Plan for the Capitol of the state of Washington or similar long-range facilities plan encompassing the selected site. Also, explain how the site promotes regional transportation policies as required by the Growth Management Act of 1990.

On the basis of the above information, the Predesign Study should include a recommendation for the best site to be selected for the project.